

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 2, 4-6, 8, 10-12 are presently active. Claims 2, 4, 8, and 10 have been amended, and Claims 1, 3, 7, and 9 have been cancelled without prejudice or disclaimer by way of the present amendment. The features that have been added to amended Claims 2, 4, 8, and 10 find support in the specification (e.g., page 11, lines 2-14) and therefore no new matter is added.

In the outstanding Office Action, Claims 2-3 and 8-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilbert et al. (U.S. Patent No. 6,016,311, hereafter “Gilbert”) and further in view of Inata (U.S. Patent No. 5,910,953); Claims 4 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilbert and Inata and further in view of Baden et al. (U.S. Patent No. 6,353,598, hereafter “Baden”); Claims 5 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilbert and Inata and further in view of Baden; Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gilbert and Inata and further in view of Yun (U.S. Patent No. 6,463,295).

In response to the rejection of independent Claims 2 and 8 under 35 U.S.C. § 103(a), Claims 2 and 8 are amended to clarify the method of allocating radio resources and the base station apparatus to include the feature of obtaining a ratio where the ratio is based on the empirical data corresponding to a present time period and a current ratio between traffic of the uplink and traffic of the downlink based on current traffic. In the claims as amended, a ratio between traffic of uplink and traffic of downlink is obtained based on the empirical data corresponding to a present time period and a current ratio between traffic of the uplink and traffic of the downlink based on current traffic.

Communication usage patterns on an uplink and downlink between a base station and mobiles are constantly evolving.¹ As larger bandwidths are required for modern communications capable of database information transmission and increased data and image communication, conventional systems using symmetric allocation of resources are not able to efficiently allocate resources and conventional TDD methods are not able to allocate resources asymmetrically while retaining stability.²

To solve this problem, the claimed subject matter of Claim 2 describes a method for allocating resources based on the combination of **both a current ratio** between traffic of the uplink and traffic of the downlink based on current traffic and empirical data regarding traffic of the uplink and traffic of the downlink to the respective time periods corresponding to a present time period. Independent Claim 8 recites analogous features directed toward a base station apparatus.

Gilbert teaches incorporating the present data into past data successively so as to accumulate moment data along the time axis to obtain bandwidth utilization parameters.³ Gilbert does not use empirical data alone or in combination with a current ratio between traffic of the uplink and traffic of the downlink based on current traffic. As a result, Gilbert necessarily suffers from the decreased stability of only using one factor to determine resource allocation.⁴ This defect is overcome by the claimed subject matter of independent Claims 2 and 8. Therefore, it is respectfully submitted that Claims 2 and 8 patentably distinguish over Gilbert.

¹ Specification, page 1, lines 13-28.

² Specification, page 1, line 29 – page 3, line 15.

³ Gilbert, col. 8, lines 1-37.

⁴ Specification, page 4, lines 12-17.

Further, it is respectfully submitted that Inata fails to cure the deficiencies identified above with respect to Gilbert. Accordingly, the outstanding rejection of Claims 2-3 and 8-9 are respectfully traversed, and it is respectfully requested that the rejection of Claims 2-3 and 8-9 under 35 U.S.C. § 103(a) be withdrawn.

In response to the rejection of Claims 4-5 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Gilbert in view of Inata and further in view of Baden et al. (U.S. Patent No. 6,353,598, hereafter “Baden”), for the reasons discussed above, Claims 2 and 8 are believed to be allowable. Further, it is respectfully submitted that Baden fails to cure the deficiencies identified above with respect to Gilbert. Accordingly, the outstanding rejection of Claims 4-5 and 10-11 is also respectfully traversed, as they are dependent upon Claims 2 and 8 respectively. Therefore it is respectfully requested that the rejection of Claims 4-5 and 10-11 under 35 U.S.C. § 103(a) also be withdrawn.

In response to the rejection of Claims 6 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Gilbert and Inata and further in view or Yun (U.S. Patent No. 6,463,295), for the reasons discussed above, Claims 2 and 8 are believed to be allowable. Further, it is respectfully submitted that Yun fails to cure the deficiencies identified above with respect to Gilbert. Accordingly, the outstanding rejection of Claims 6 and 12 is also respectfully traversed, as they are dependent upon Claims 2 and 8. Therefore it is respectfully requested that the rejection of Claims 6 and 12 under 35 U.S.C. § 103(a) also be withdrawn.

Consequently, in view of the present amendment and in light of the above discussion, the application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Bradley D. Lytle

Attorney of Record
Registration No.: 40,073

Scott A. McKeown
Registration No. 42,866

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

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